

Lynx 450X Ultra Main Frame

Assembly Manual v1.2

Please read this manual fully before commencing assembly.

Congratulations on your purchase of the Lynx 450X Ultra Main Frame! This main frame adds a whole new dimension to your 450X. It allows you to transform from a push/pull plastic frame into twin carbon fiber plate and 7075 aluminum construction for superior strength and rigidity. Providing more direct servo to swash connection for ultra-crisp cyclic and overall flight performance, while being as lightweight as possible. Lynx 450X Ultra Main frame is a product of long time 3D pilot experience doing prolonged testing and perfecting. Every detail and parts compatibility was strictly checked and verified.

Features:

- Fully compatible with standard 450X parts and canopy.
- Ultra rigid and lightweight design.
- Bigger Battery options, (3S, 4S and 6S) - 1300 to 2300mAh.
- Increased crash resistance. Designed to minimize crash damaged parts.
- Refined CoG for the ultimate 3D flight performance.
- Huge compatibility of servos and motors; multiple ESC and FBL mounting locations.
- Few parts account for ease of assembly, maintenance and repair.
- Clean and efficient industrial designed frame.
- Eliminate the push/pull elevator servo links and relocate from under the warm battery.

Lynx 450X Ultra Main Frame comes partially pre-assembly with an easy to read step-by-step user manual for your assembly enjoyment and support.

Items required from your donor 450X to complete assembly:

Standard complete tail boom assembly including tail rotor
Standard Main Shaft and Head assembly
Standard Main Gear Hub and tail belt assembly
Standard ESC or upgraded version - Lynx suggest 40A with switching BEC
Standard Motor or upgraded version - 29.5 mm Max outer case diameter
FBL unit
3x Standard Size Cyclic Servos or updated version
1x Standard Size Tail servo or updated version

Tools required for assembly:

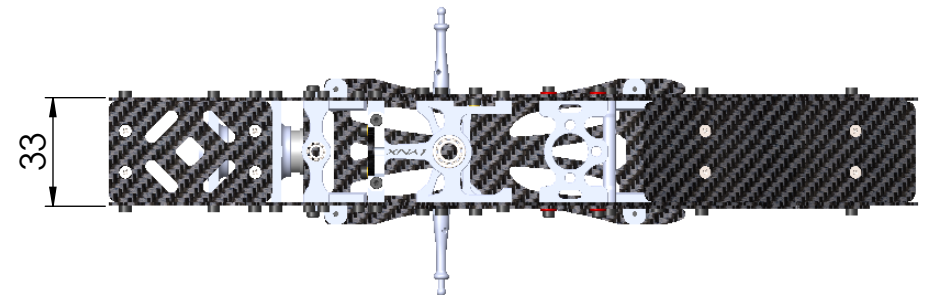
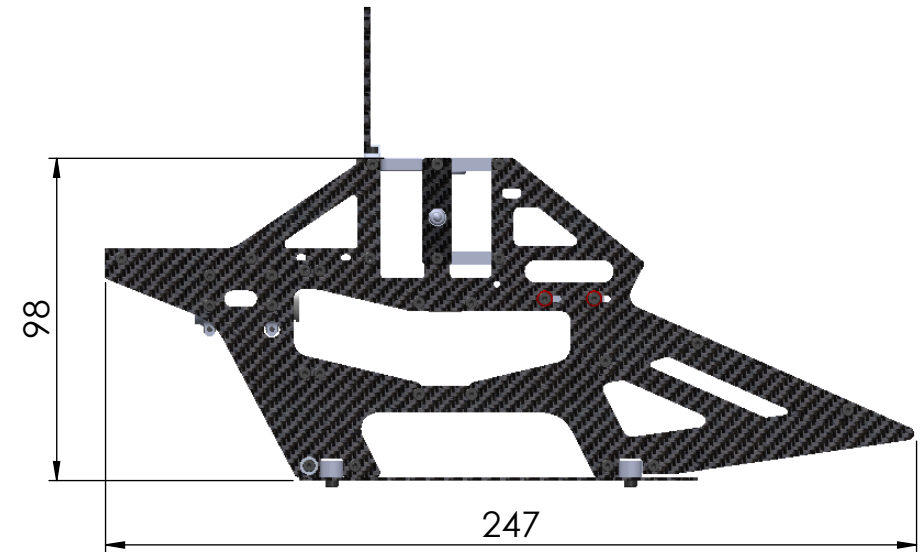
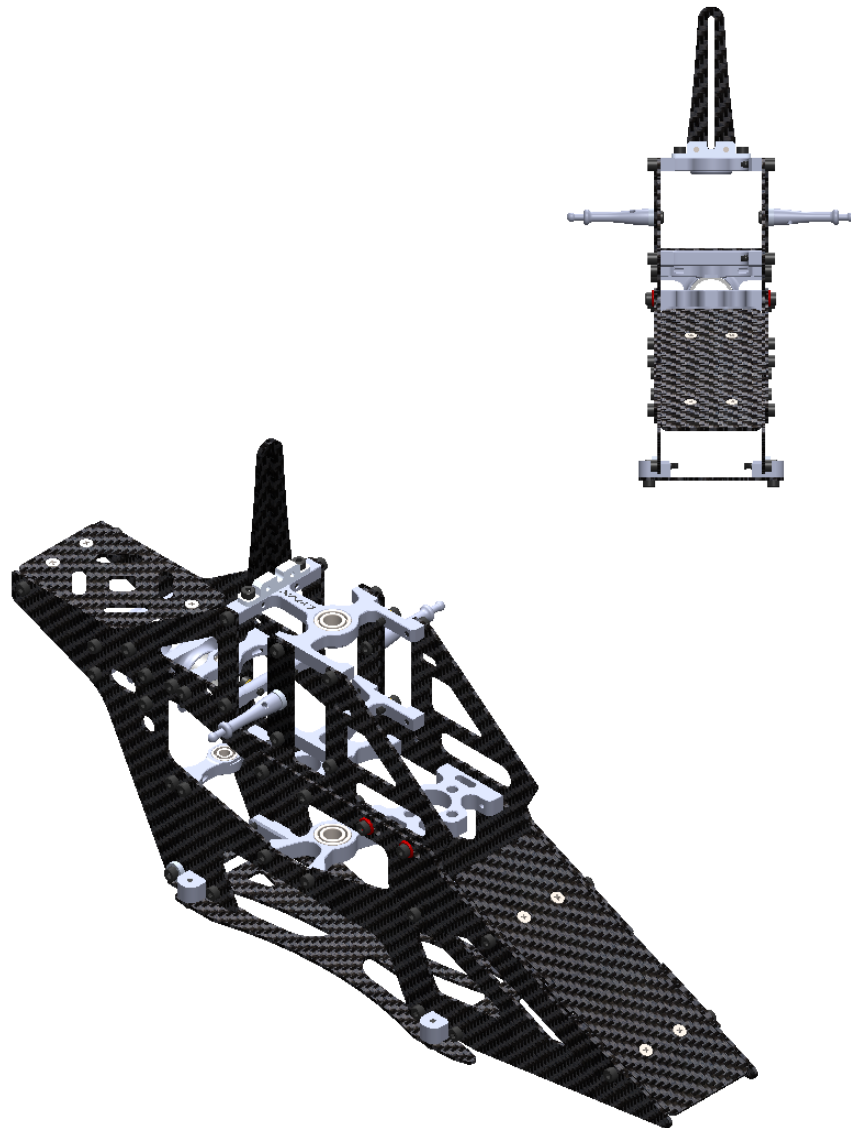
Allen drivers: 1.5mm and 2mm
Philip Screw Driver (small cross tip) # 00
Thread lock - medium (242)

Final servo and radio setup:

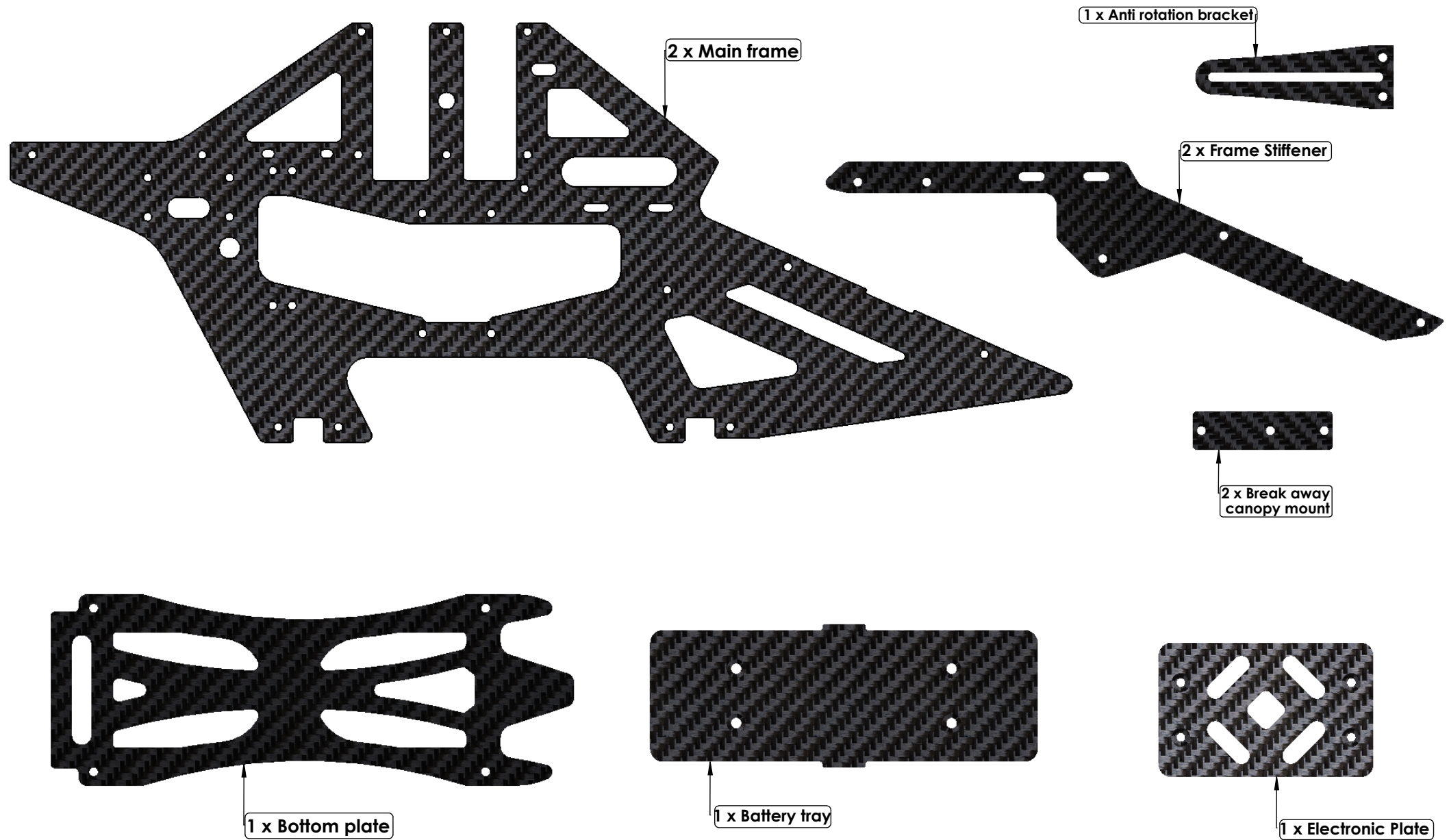
We recommend you complete the setup of your FBL unit again from scratch, including leveling all servo arms, setting zero degrees pitch, and all FBL travel adjustments, etc.

Good luck flying the new 450X with Lynx high performance upgrades system!

For any information or tips don't hesitate to contact us by e mail at service@lynxheli.com

450X LYNX - ULTRA MAIN FRAME - User Manual

CARBON FIBER KIT PRATS




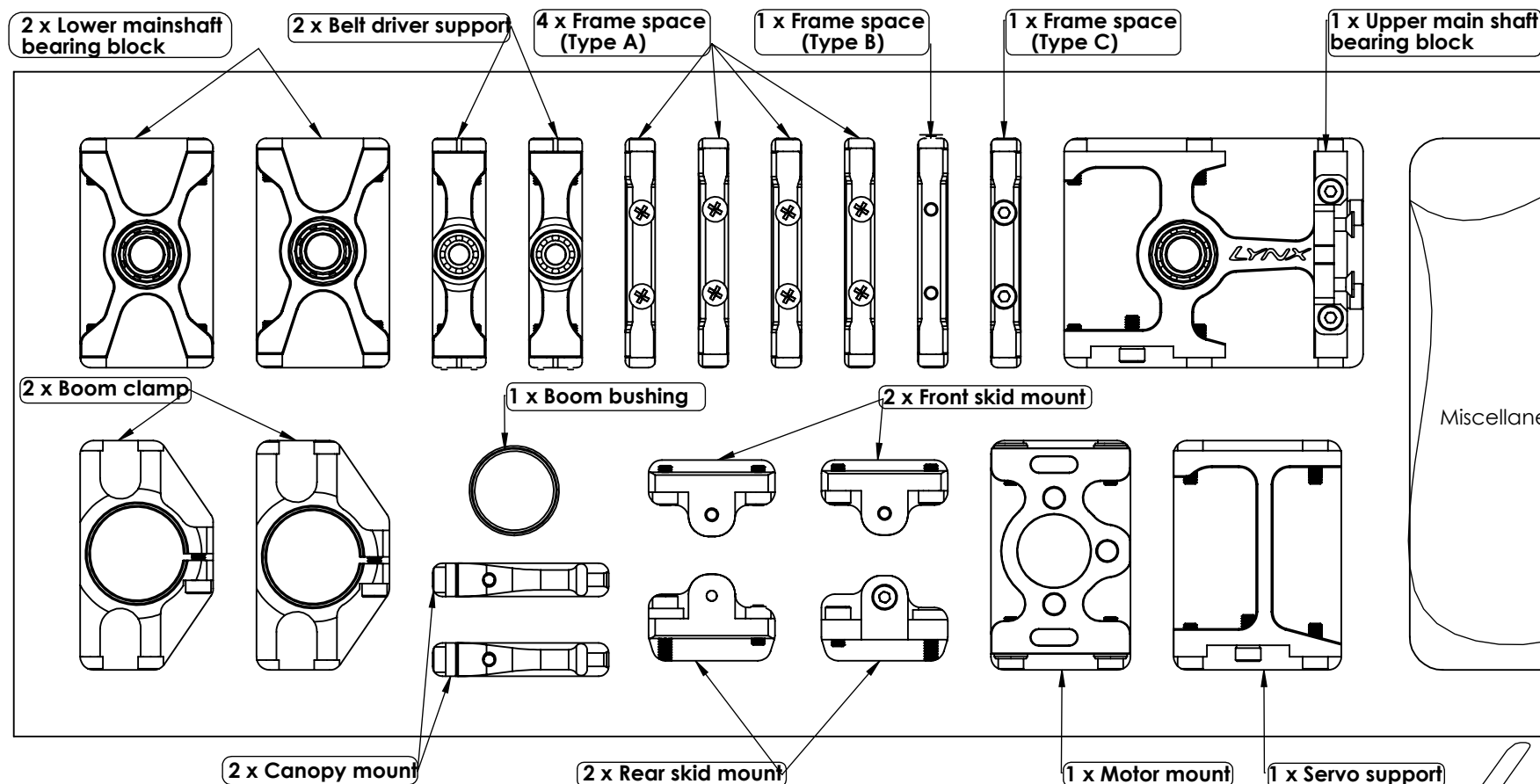
PRE ASSEMBLY KIT PARTS FOAM SUPPORT BASE

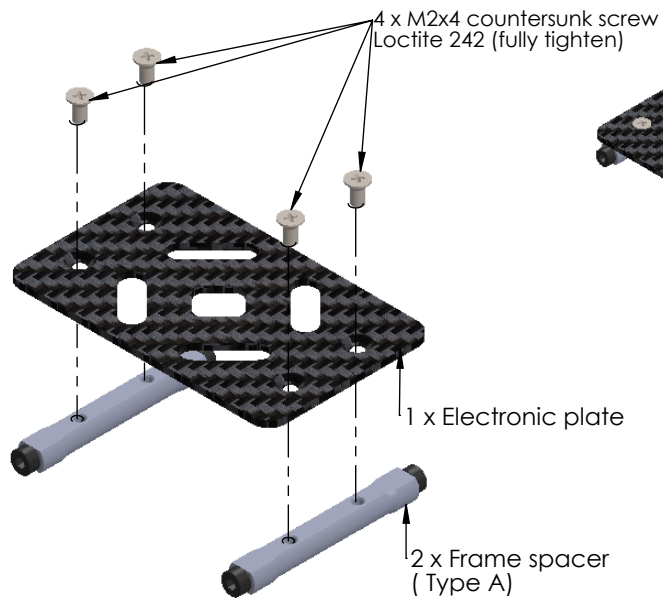
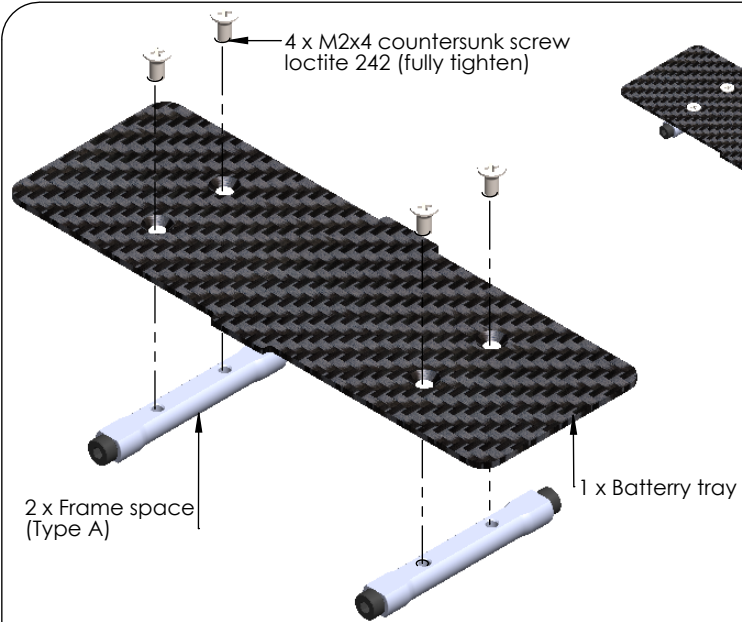
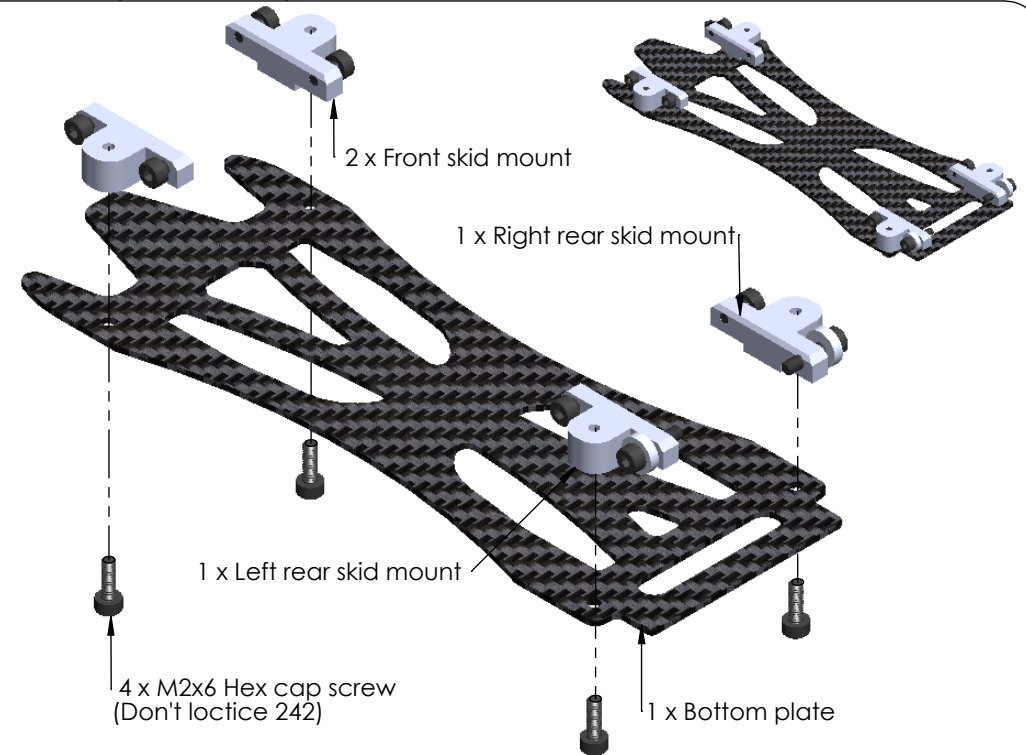
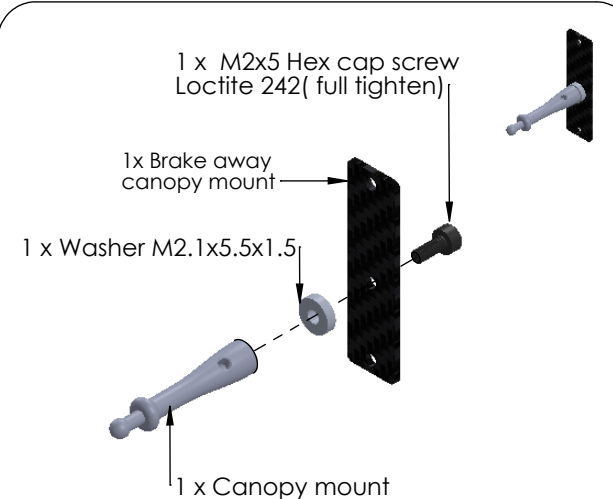
Pre-Assembled Hardware List

 6 x M2x4 Hex cap screw	 8 x M2x6 Hex cap screw	 4 x Frame C washer M2	 6 x Washer M2
 56 x M2x5 Hex cap screw	 4 x M2x8 Hex cap screw	 10 x M2x4 Countersunk phillip head cup screw	 4 x Washer M2.1x5.5x1.5

Miscellaneous Parts List

 2 x M2x4 Hex cap screw	 2 x M2x8 Hex cap screw	 2 x M2x4 Countersunk phillip head cup screw	 Vibe killer pad LX5501 - 25mm x 50mm
 8 x M2x5 Hex cap screw	 5 x M3x8 Bottom hex cap screw	 8 x 4mm Linkage ball	 Double side adhesive tape LX5500 - 25mm x 50mm
 2 x M2x6 Hex cap screw	 3 x Servo Linkage Rod M1.6 x 20	 1 x Electronic hook and loop 15mm x 250mm	 Hook and loop set 1 pc male + 1 pc female



ASSEMBLY STEP 1**1 x Electronic tray Assembly****1 x Battery tray assembly****1 x Bottom plate Assembly****2 x Canopy mount**

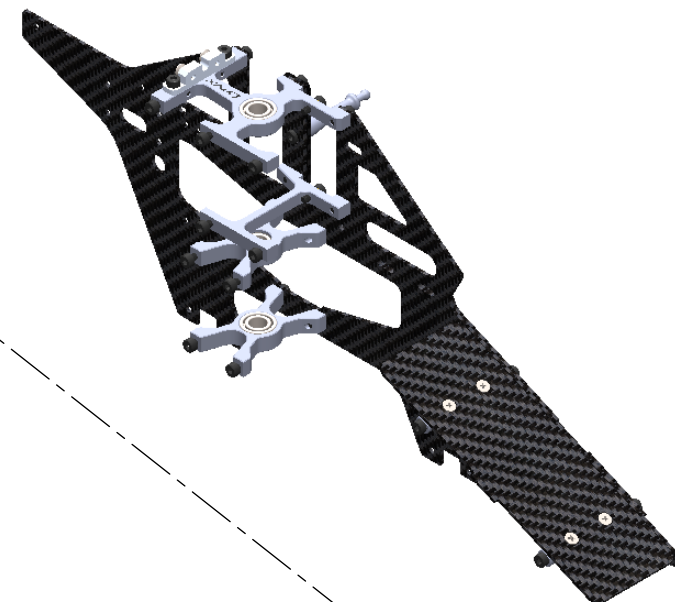
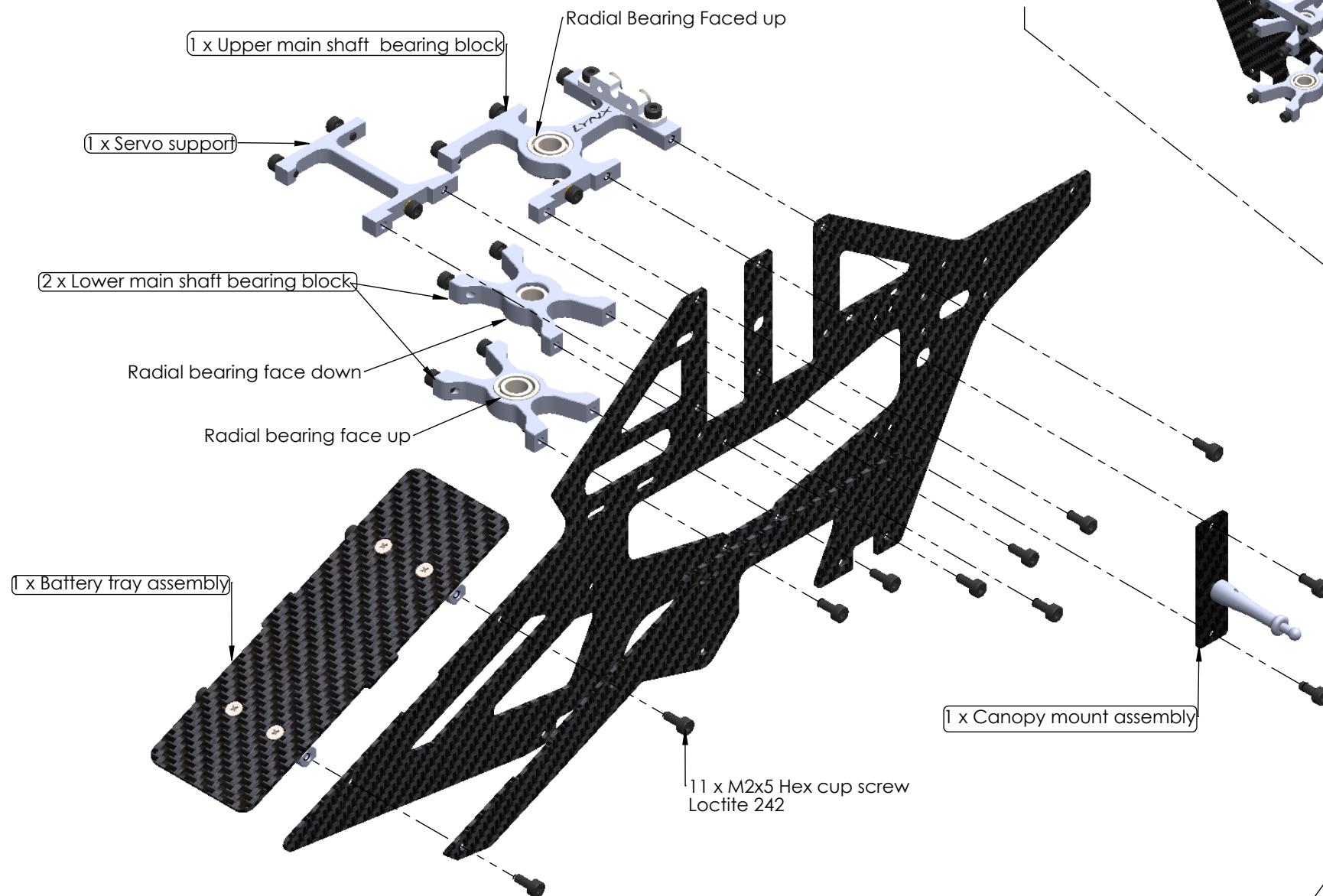
Parts Finder NOTE:
Use picture on page 3 and page 4
to find and select the necessary
parts need.

ASSEMBLY STEP 2

Note A: 3 x Bearing block screws use loctite 242, but don't fully tighten until both frames are together and the main shaft is in position

Parts Finder NOTE:
Use picture on page 3 and page 4 to find and select the necessary parts need.

Assembly view

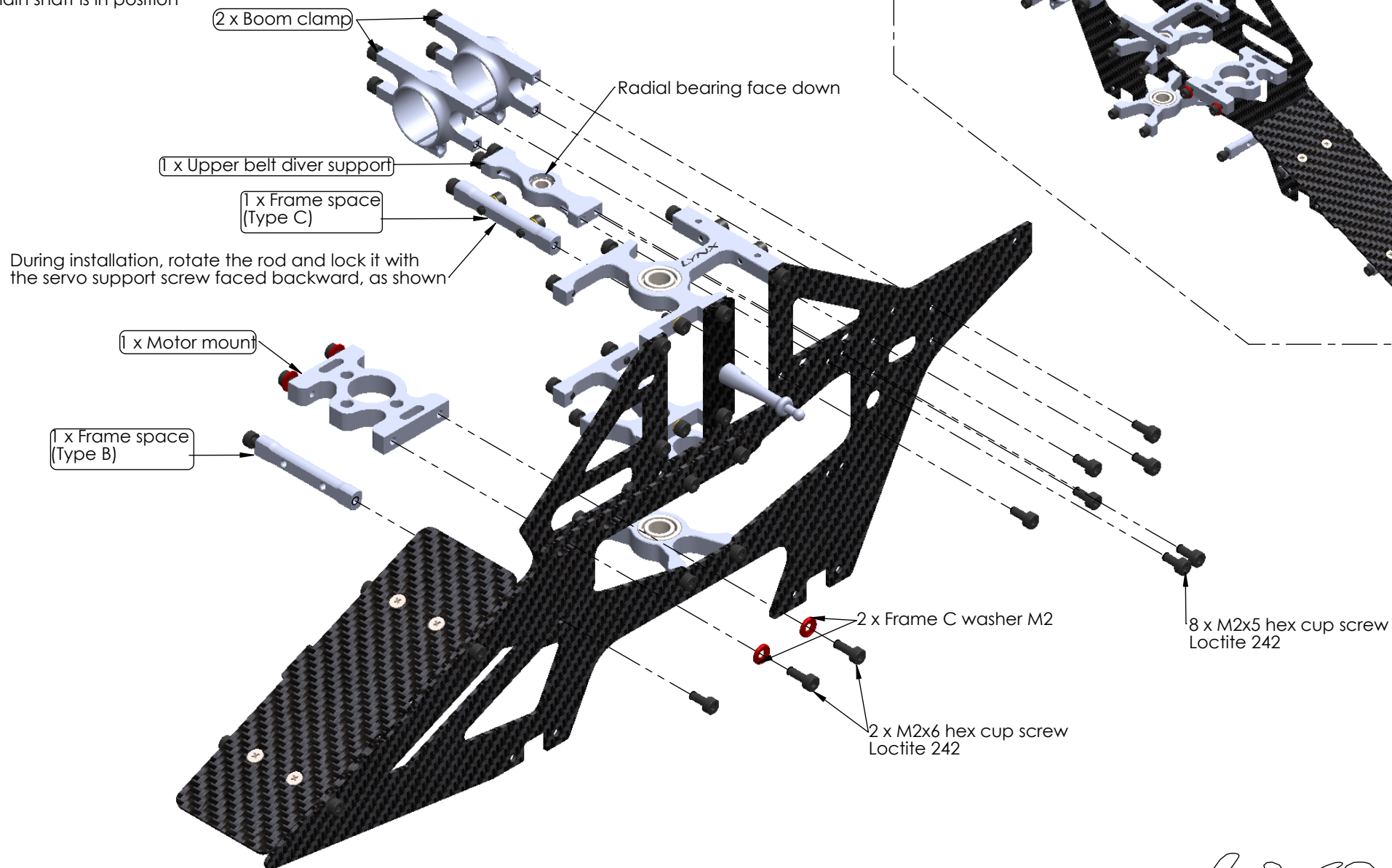


ASSEMBLY STEP 3

Note A: 1 x Motor mount screws
use loctite 242, but don't fully tighten
until the gear mesh is adjusted in a later
step

Note B: 3 x Bearing block screws
use loctite 242, but don't fully tighten
until both frames are together and the
the main shaft is in position

Parts Finder NOTE:
Use picture on page 3 and page 4 to find
and select the necessary parts need.

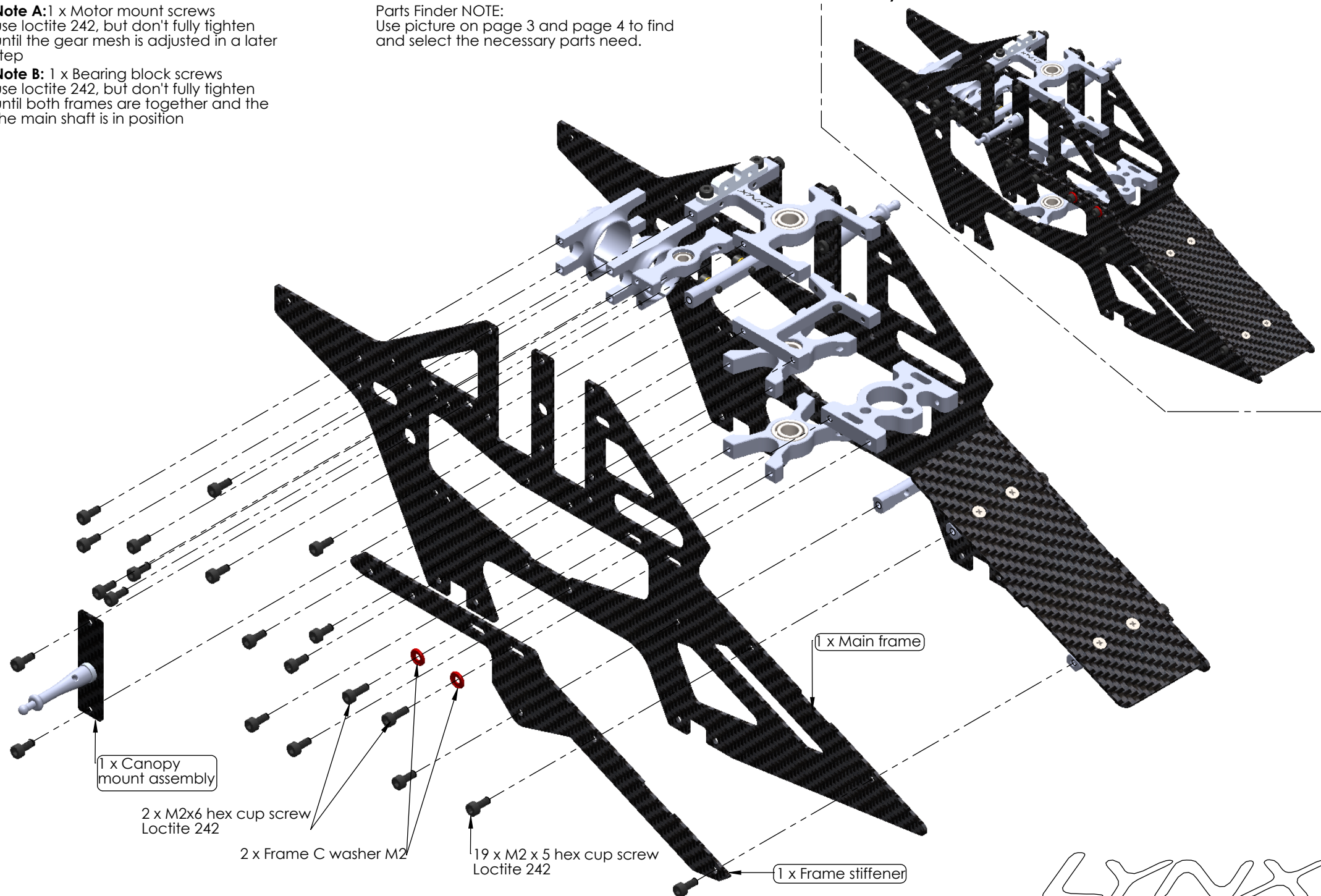
Assembly view

ASSEMBLY STEP 4

Note A: 1 x Motor mount screws
use loctite 242, but don't fully tighten
until the gear mesh is adjusted in a later
step

Note B: 1 x Bearing block screws
use loctite 242, but don't fully tighten
until both frames are together and the
the main shaft is in position

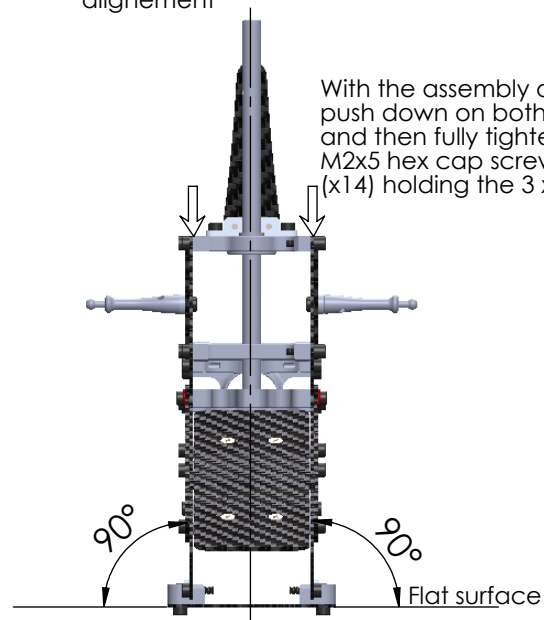
Parts Finder NOTE:
Use picture on page 3 and page 4 to find
and select the necessary parts need.

Assembly view

ASSEMBLY STEP 5

Note A: Main Frame and Bearing Block alignment

With the assembly on a flat surface, push down on both frames together and then fully tighten all M2x5 hex cap screws (x14) holding the 3 x bearing blocks



1 x Anti rotation bracket

2 x M2x4 Countersunk phillip head screw
Loctite 242(full tighten)

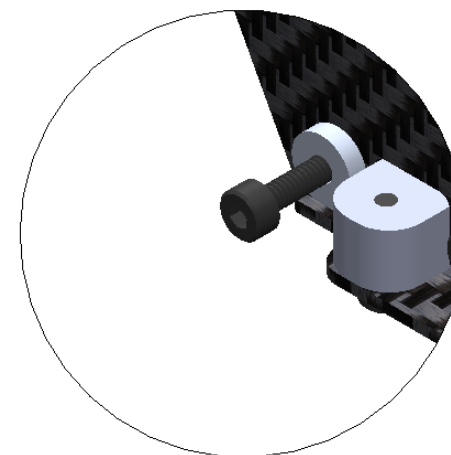
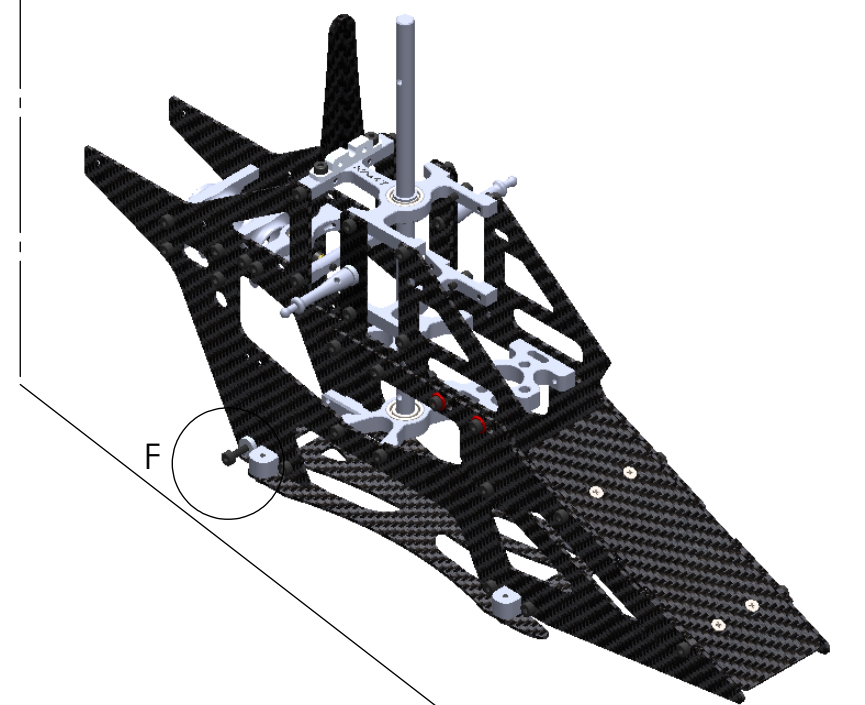
Insert main shaft and follow instruction NOTE A.

2 x Spacer 2.1x5.5x1.5
2 x M2x8 hex cup screw
(Don't Lock in this moment
See Detail F)

6 x M2x4 hex cup screw
Loctite 242(full tighten)

1 x Bottom plate assembly

Assembly view

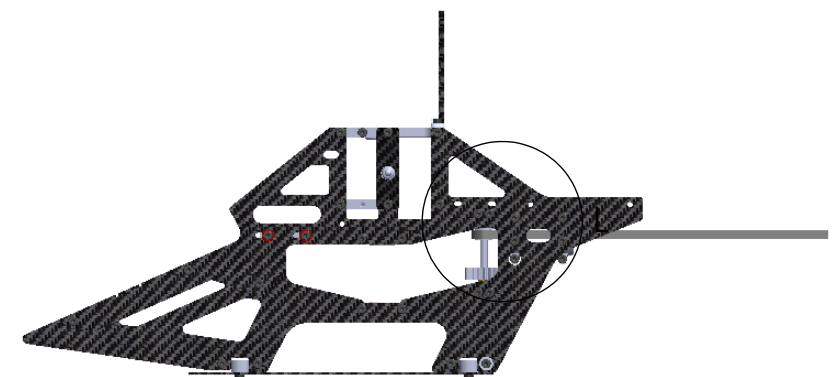
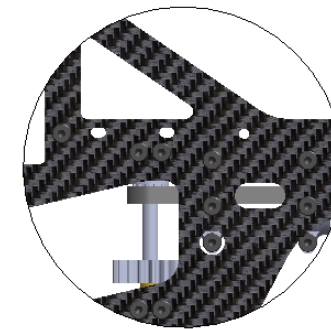
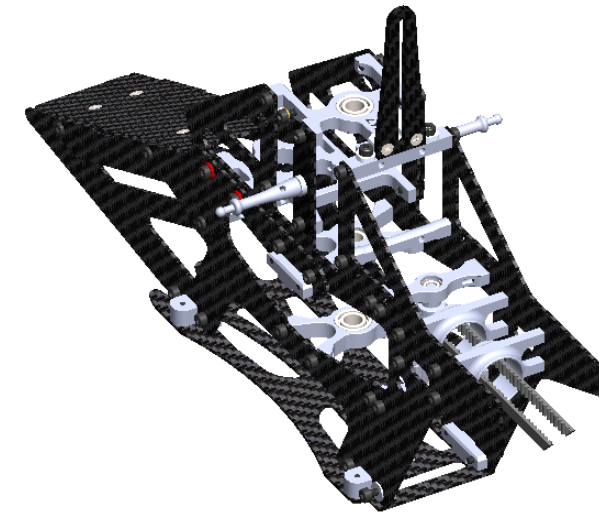
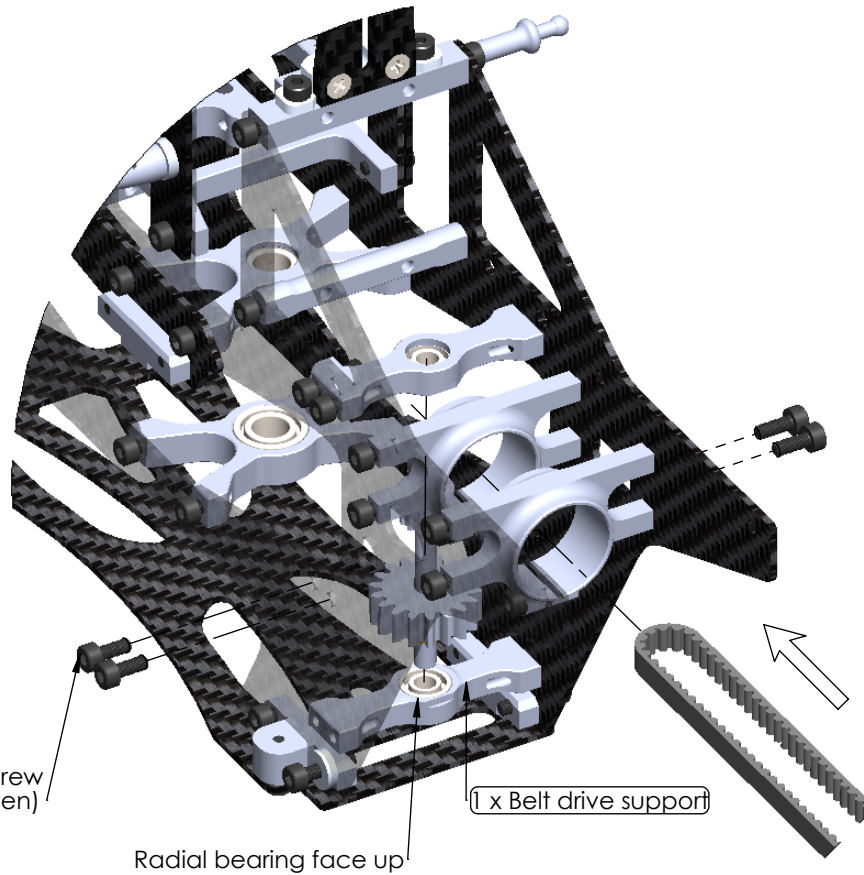


DETAIL F

ASSEMBLY STEP 6**Belt installation tips**

Belt Installation Tips:

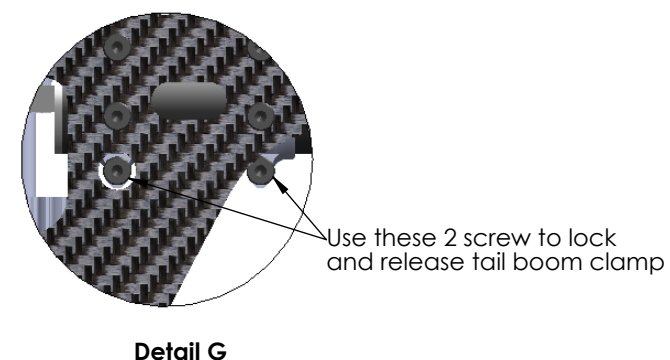
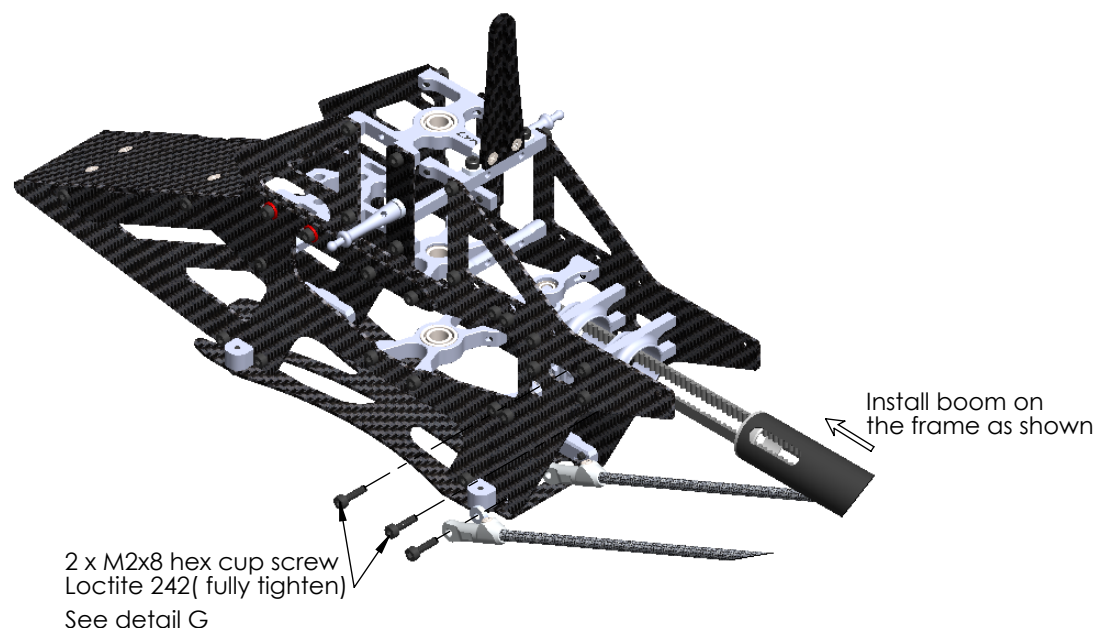
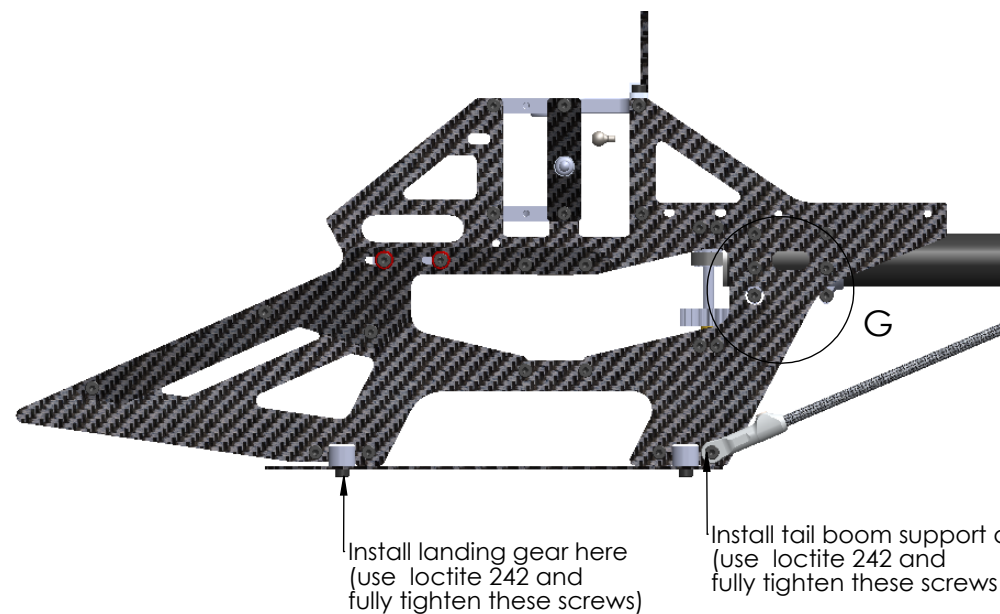
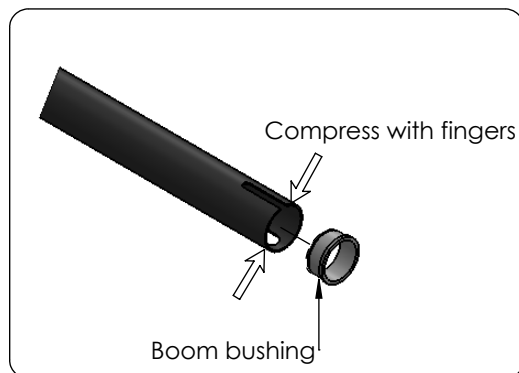
- 1- Insert Tail Belt through the boom clamps
- 2- Turn frame upside down and install tail drive shaft in through the belt.
- 3- Install Lower Belt Drive Support

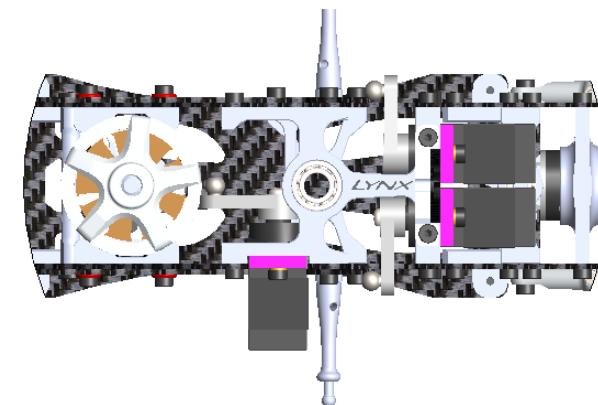
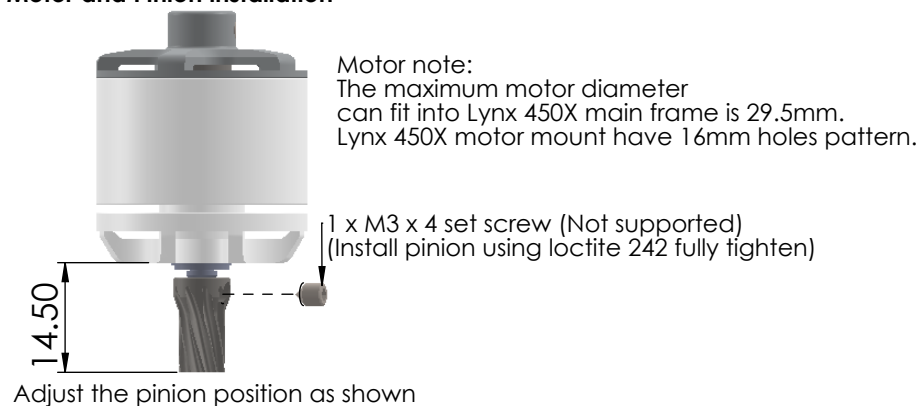


ASSEMBLY STEP 7**Installation boom**

Boom bushing and boom install tips.

Before installing the bushing into the boom, pinch the tip of the boom going into the frame in order to hold the bushing in place temporarily until the boom clamps are tightened. At which point it will stay clamped in place. This is to add structure to the end of the boom where the cutouts are. You can reuse the bushing if you replace the boom.

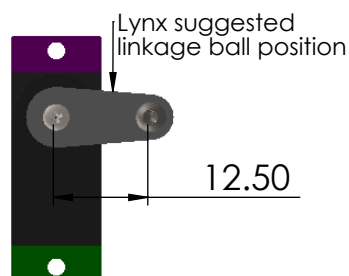


ASSEMBLY STEP 8**Motor and Pinion installation****Servo Installation**

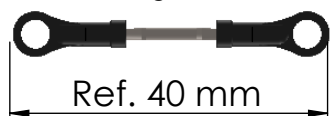
Note 1 - Trim Servo Lever and install ball on the show position.

Note 2 - We recommend in this moment to identify AIL - PIT - ELE servos position and using your FBL sytem, set the center stick position and the 90 deg of the servo lever. Lock servo lever with necessary screw. Add loctite 242.

Note 3: Cyclic servos need to be installed in the frame with the servo lever towards the top as shown.



3 x Servo Linkage Rod M1.6 x 20

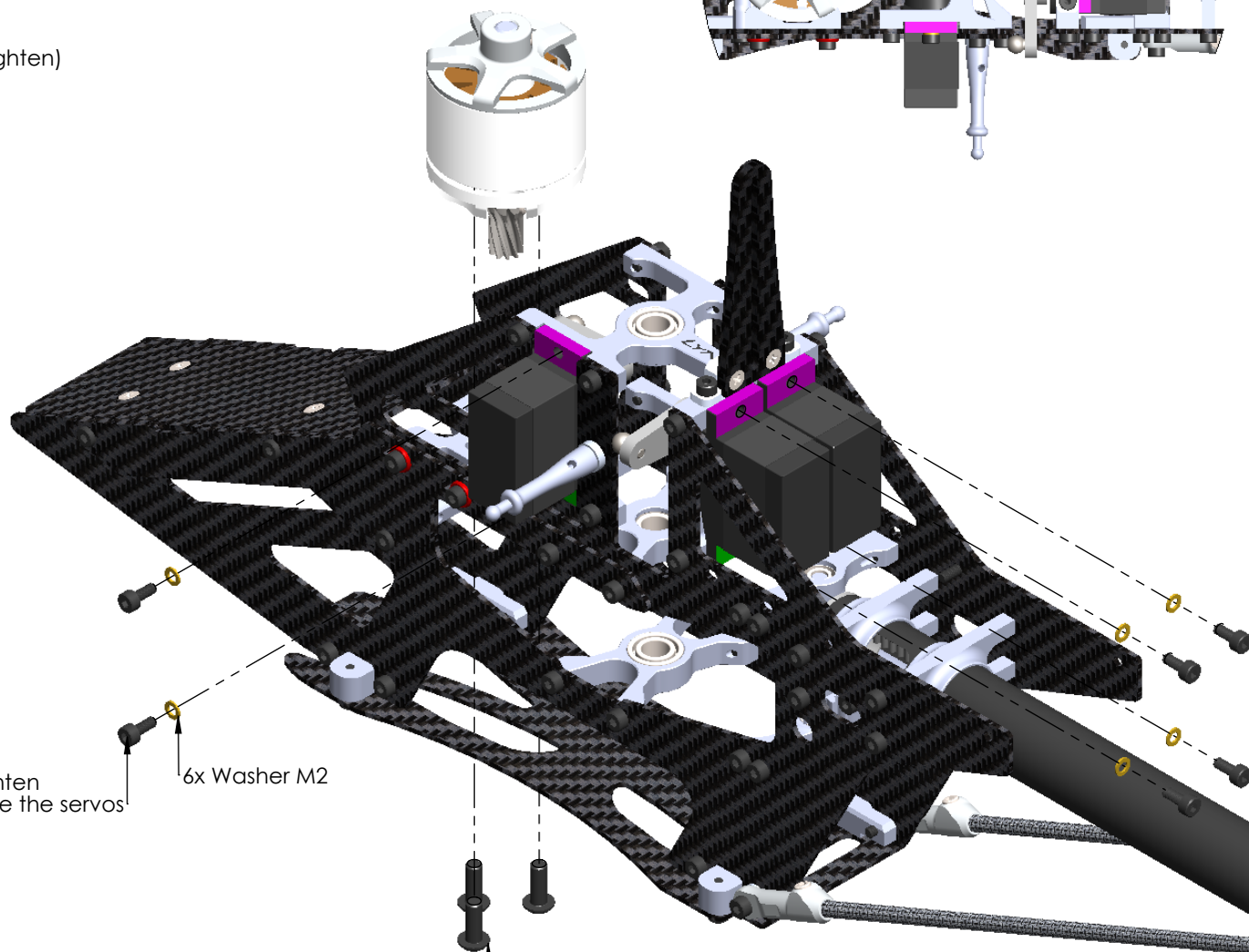


Install the Plastic Ball Links on the rod.
Try to leave equal thread showing on
each side, keeping the rod centered.

6 x M2x5 Hex cap screw
(use loctite 242)
Be careful not to over tighten
these screws and damage the servos

6x Washer M2

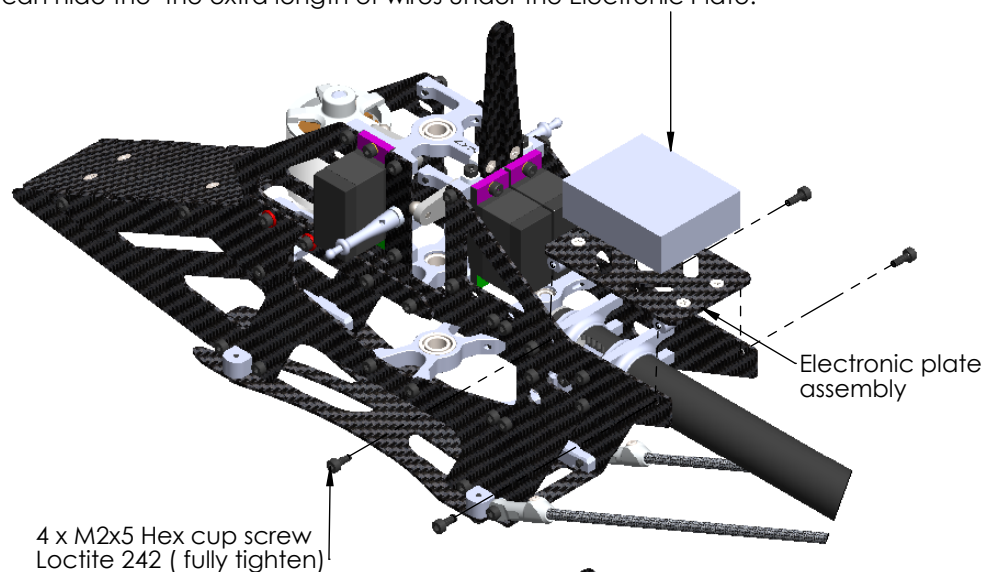
3 x M3 x 8 bottom hex cap screw
(use a small amount of loctite 242,
and tighten fully)



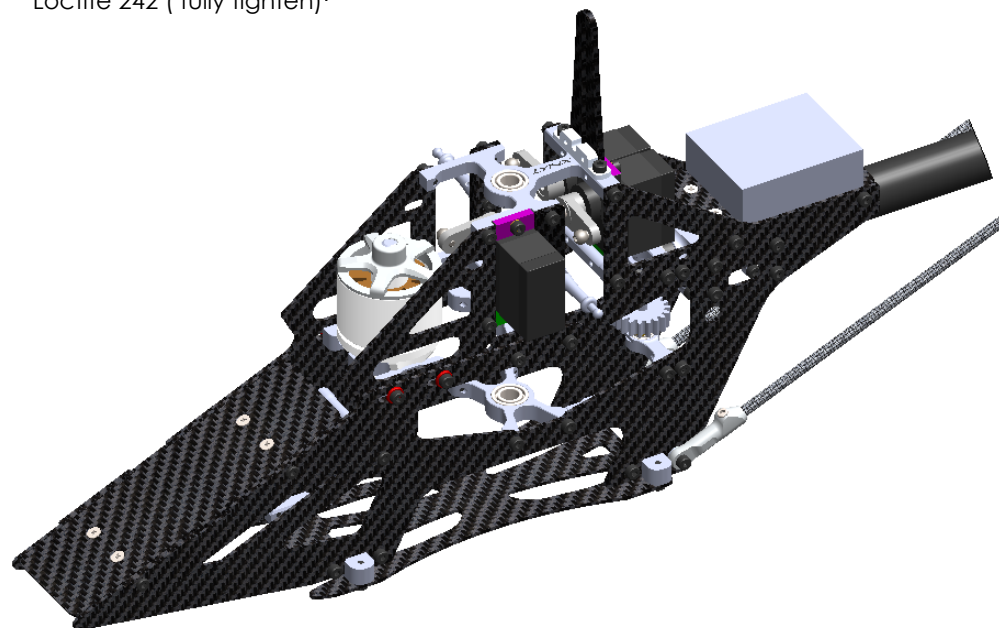
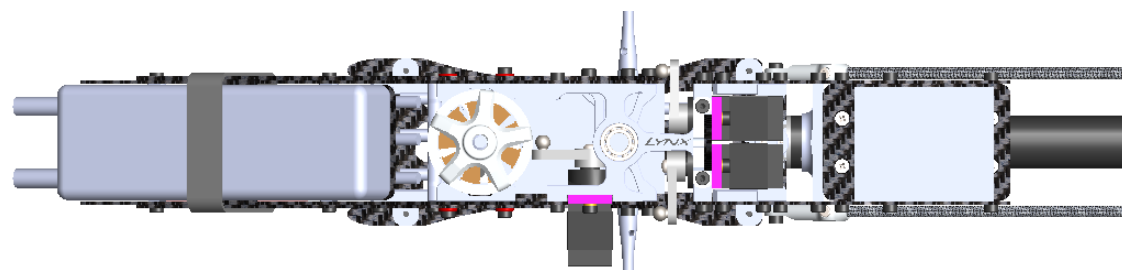
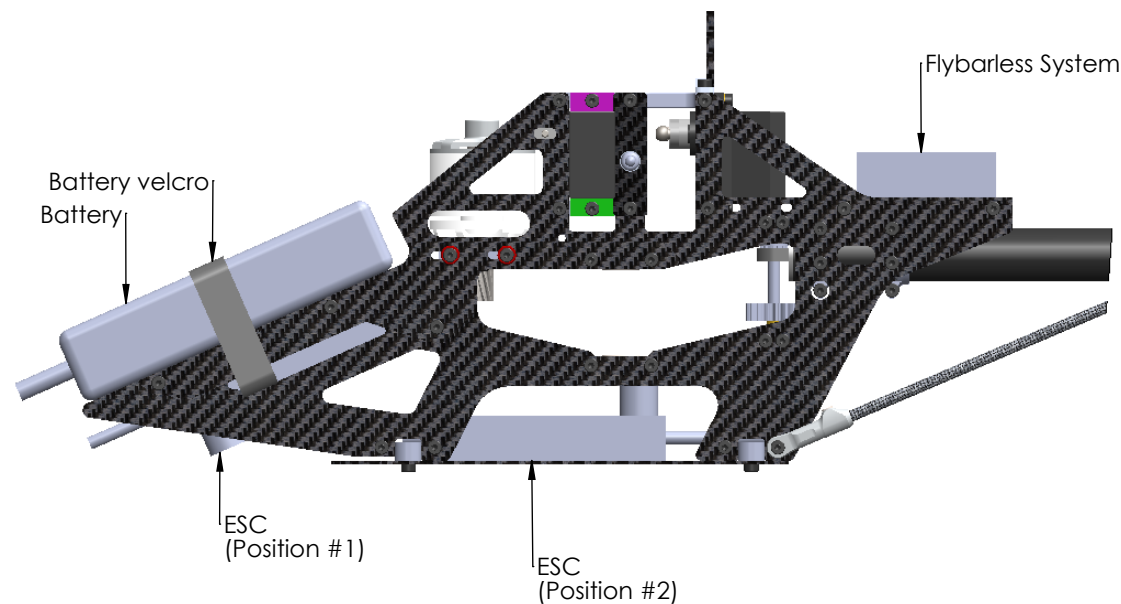
ASSEMBLY STEP 9**Electronic plate installation**

Install your FBL unit here (on the Electronic Plate). Use Lynx Vibe Killer pad included with the Ultra Frame. We suggest mounting your FBL unit with the pins and connectors facing forward. Having the USB port facing the rear.

Wire routing tip: For the cleanest looking electronics setup, you can hide the extra length of wires under the Electronic Plate.

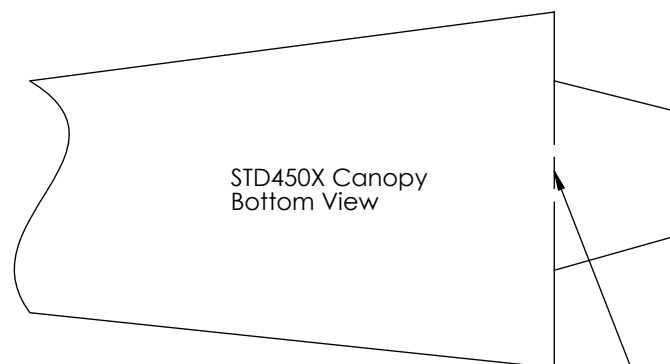


4 x M2x5 Hex cup screw
Loctite 242 (fully tighten)

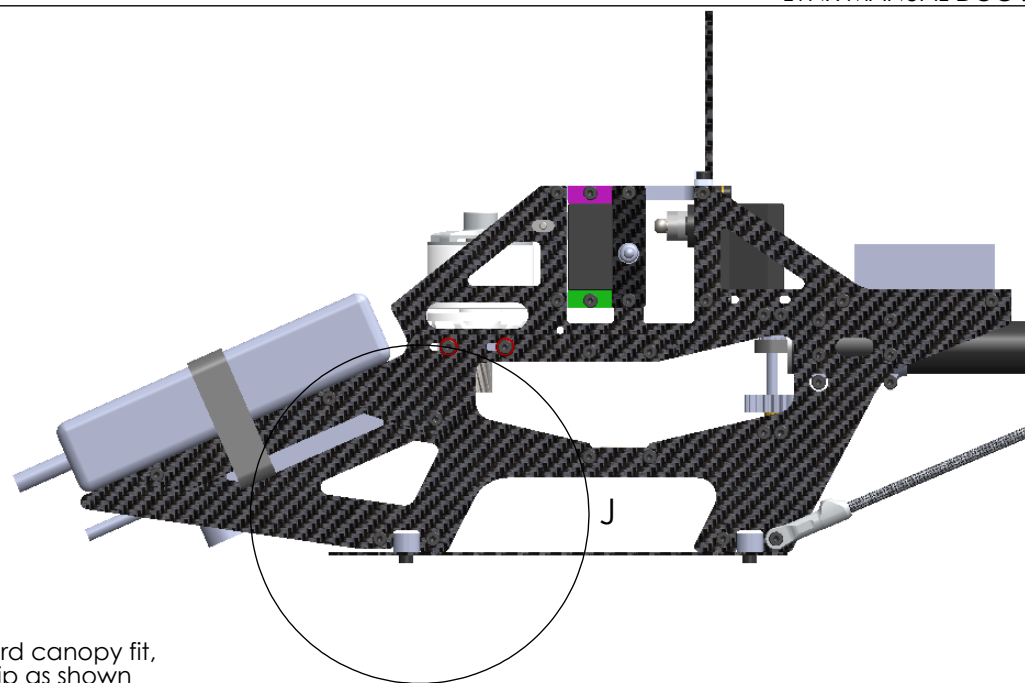
**ASSEMBLY STEP 10****Electronics installation position**

ASSEMBLY STEP 11

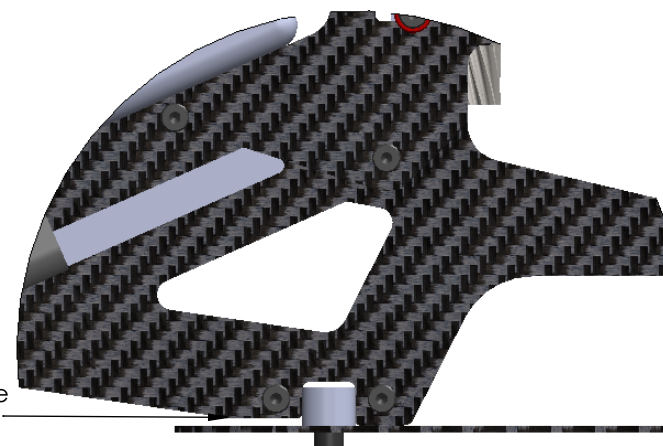
Canopy installation



For a perfect standard canopy fit,
trim off the canopy lip as shown



Insert the bottom of the
canopy into this recess



DETAIL J